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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

SCHECHTER, ANDREW M

ART UNIT PAPER NUMBER

2871

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/380,781

Applicant(s)

YOSHINO ET AL.

Examiner

Andrew Schechter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-19 and 22-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-19 and 24-28 is/are allowed.
- 6) ☒ Claim(s) 3-6, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 20 February 2003 have been fully considered but they are not persuasive.

The applicants discuss on pp. 5-6 of the differences between *Sato* and the present invention; however, these differences were not reflected in the language of the claims rejected below. The applicants also argue on p. 6 that *Sato* discloses the dummy electrode and driving electrode shorted to each other, which the present invention prevents this by forming an insulating film between them. This is not persuasive, since Fig. 2 of the present application shows them shorted in the same manner as is disclosed by *Sato*.

The applicants argue that Figs. 12 and 15 of *Shimada* do not "disclose the same technical idea", presumably implying that rejections should only draw on one or the other; this is not persuasive, since both figures refer to Example 7 and the relevant features are consistent with each other and do not belong to different embodiments.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 22 is rejected under 35 U.S.C. 102(e) as being anticipated by *Hayakawa et al.*, U.S. Patent No. 5,838,411.

Hayakawa discloses [see Figs. 10 and 11, for instance] a liquid crystal device comprising dummy electrodes [8D1-8D4] opposite an imaging electrode [9a] and arranged along an elongated direction of a drive electrode [39], being separated by a plurality of slits across the elongated direction [see figures], so a leakage current is cut off. Claim 22 is therefore anticipated.

[Claims 12 and 23 differ from *Hayakawa* which does not disclose conductive particles in the sealing member; claim 5 differs from *Hayakawa* which does not have a light-cutting film, since 8 and 9 are made of ITO which is transparent; claim 26 differs from *Hayakawa* which does not have dummy electrode at a position covered by the sealing member.]

4. Claims 5 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by *Shimada et al.*, U.S. Patent No. 6,268,895.

Shimada discloses [see Fig. 10-15, for instance] an LCD with a leak current preventing function, comprising first and second transparent substrates [203, 213], first and second transparent imaging electrodes [212, 215] formed on opposite inner surfaces, sealing member [217] for providing an injecting area, forming a gap, and sealing the liquid crystal in the gap, conductive light-cutting film [220] in both the image

area and the peripheral portion outside the image area, and separation slits [see Figs. 12 and 14, and col. 19, lines 20-48] in the peripheral area outside the image area, where the film superposes the sealing member, and so as to surround said image area [see col. 19, lines 31-57 which describes the light cutting film shielding between both the gate lines 204 and the source lines 209; it thus covers all four sides of the image area, surrounding it]. Claim 5 is therefore anticipated.

The width of the slit is less than the gate line spacing, so it is far less than $3/10$ the width of the wall of the sealing member. Claim 6 is therefore anticipated as well.

5. Claims 3, 4, 22, and 23 are rejected under 35 U.S.C. 102(a) as being anticipated by *Sato et al.*, Japanese Patent No. 06-051332A.

Considering the limitations of claim 23, *Sato* discloses a liquid crystal apparatus comprising: first and second substrates [8 and 9], first and second imaging electrodes [1 and 2] on opposite surfaces, a sealing member [4] with conductive spacers [see abstract], a drive lead electrode [2] formed on a position covered by the sealing member, and a dummy electrode [5] formed oppositely to the drive lead electrode at the sealing member, wherein the dummy electrode has a plurality of slits [Fig. 1] to divide it into a plurality of electrically insulated parts. Claim 23 is therefore anticipated by *Sato*. [The applicants argued that the slits in *Sato* are perpendicular to the slits of the present invention, and each piece of the dummy electrode over a single drive electrode in *Sato* has no slits analogous to those of the present invention. This distinction is not reflected in the claim language, however.]

The conductive spacers in *Sato* are inherently smaller than the width of the slits dividing the dummy electrode [else the device would not work], and the dummy electrode is parallel to and along the side of the sealing member. Claims 3 and 4 are therefore anticipated by *Sato*.

Considering claim 22, the device of *Sato* has a dummy electrodes [5, on either side] arranged opposite an imaging electrode [2], arranged along an elongated direction (vertical in the figure) of a drive electrode [1], separated by slits across the elongated direction, which prevent current flowing in the dummy electrodes. Claim 22 is therefore anticipated by *Sato*. [As above regarding claim 23, the claim language does not reflect the differences in the inventions pointed out by the applicants.]

Allowable Subject Matter

6. Claim 7-19 and 24-28 are allowed.
7. The following is a statement of reasons for the indication of allowable subject matter:

Claim 7 adds to the previous claim 5 the limitation that “the light cutting film being superposed by the first and second transparent imaging electrodes and with the sealing member in the peripheral area”. Since *Shimada* discloses an active-matrix LCD, the transparent electrodes for image (also called “imaging electrodes” - the examiner understands these to be the transparent electrodes which cross to form the pixels in a passive matrix device, and to be the pixel electrodes in an active matrix device) do not overlap the sealing material, so it does not meet this additional limitation. *Sato*, on the

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other hand, does not disclose the light-cutting film recited in claims 5 and 7. Since the prior art of record does not teach this combination of features, claims 7-9 are allowed.

Claim 10 adds to the previous claim 5 the limitation that "the light-cutting film has a separation slit for dividing the light-cutting film into a plurality of portions at a slightly inward position from the sealing member"; this "slightly inward position" of the slit is not disclosed by *Shimada* or the other prior art of record, so claims 10, 11, 24, and 25 are allowed.

Claims 14 and 16 contain the limitations of claims 7 and 10 respectively, so claims 14-17 are allowed.

Claim 12 adds to claim 23 (rejected above over *Sato*) the limitation of a conductive light-cutting film having slits and superposed with the sealing member. *Sato* does not disclose this feature. *Shimada* does disclose this feature, but on further consideration the examiner does not believe it would be obvious to one of ordinary skill in the art to combine these features: *Shimada*'s light-cutting film is taught to have slits which the electrodes it covers are themselves opaque [compare Figs. 11 and 12 of *Shimada*], whereas the electrodes in *Sato* are transparent ITO. Claims 12, 13, 18, and 19 are therefore allowed.

Claim 26 recites a dummy electrode formed opposite to one of said driving electrodes with the dummy electrode comprising electrically insulated island portions, at least two of which are provided oppositely to said one of said driving electrodes. This distinguishes the claimed invention from that of *Sato*, where only one dummy electrode portion is over each driving electrode, and *Shimada*, where the dummy electrode

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portions are provided between [see Figs. 12 and 14] rather than oppositely to the driving electrodes. Claims 26-28 are therefore allowed.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (703) 306-5801. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4711 for regular communications and (703) 746-4711 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AS
Andrew Schechter
April 14, 2003


T. Chondhury
Primary Examiner
Tech. Center 2800